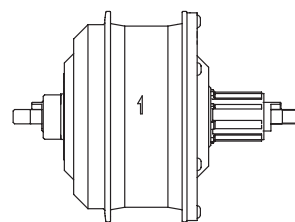




E-Bike components

User manual

Rear wheel motor



Contents

Safety information.....	3
Riding the E-Bike.....	5
Product features and specifications.....	6
Display / lighting.....	7
Battery.....	8
Battery charger.....	8
Charging the battery.....	9
Battery charging indicator.....	9
Charging possibilities.....	10
Battery faults.....	10
Inserting the battery.....	11
Removing the battery.....	11
Switching the bike ON/OFF.....	12
Base screen display.....	13
1. Current speed.....	13
2. Display for changing assist mode.....	13
3. Assist level indicator.....	13
4. Battery capacity.....	14
5. Range.....	14
6. Changing trip information.....	15
7. Changing background lighting.....	15
Headlight and taillight.....	16
Charging your smartphone.....	16
Overheating warning.....	16
Error codes.....	17
EC Declaration of Conformity.....	18

Safety information

WARNING

There is an increased risk of injury – even fatal – if you do not follow instructions.

Managing the battery

- ▶ Use only batteries and chargers from SR Suntour with your bike. Use of other battery packs can cause injury and involve a risk of fire. If you use other battery packs, SR Suntour will assume no liability or warranties.
- ▶ Do not throw the battery pack into a fire.
- ▶ The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- ▶ Do not use the battery for any other purpose.
- ▶ Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short-circuit. Shorts caused in this way will invalidate any warranty claims.
- ▶ Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- ▶ Do not connect, or disconnect the battery pack / charger with wet hands.
- ▶ Keep the battery / charger out of reach of children/animals.

WARNING

There is a risk of serious injury – even fatal – if you do not follow instructions.

How safe riding is ensured

- ▶ While riding, do not focus your attention too much on the screen, as this can lead to accidents.
- ▶ Ensure that the wheels are securely attached to the bike before you begin your trip. If the wheels are not securely attached, the bike may fall over, causing severe damage.
- ▶ When riding a power-assisted bike, be sure that you are completely familiar with the starting characteristics of the bike before riding on multilane roads and footpaths. If the bike suddenly switches on, accidents can happen.
- ▶ If applicable, check that the bike lights are working before you ride at night.

How safe riding is ensured

- ▶ Remove the battery pack from the eBike before you start working on it (e.g., assembly work, maintenance, working on the chain, etc.), before transporting it by car or plane, or before storing it. There is a risk of injury in case of accidental activation of the eBike system.
- ▶ Be sure to remove the battery before you perform wiring or installation work on the bike. Otherwise there is a danger of electric shock.
- ▶ When you install this product, be sure to follow the instructions given in the user manual. We also recommend that you use only genuine SR SUNTOUR parts. If nuts and bolts are left loose or the product is damaged, the bike may fall over suddenly and cause serious injury.
- ▶ After you have carefully read the user manual, store it in a safe place for later reference.
- ▶ Ensure that unused connections are provided with caps.
- ▶ Contact a retailer for installation and adjustment of the product.
- ▶ To allow riding in wet weather, the product is designed to be completely waterproof. Nevertheless, do not expose the product intentionally to water.
- ▶ Do not expose the bike to high-pressure cleaning. If water should penetrate into one of the components, operating problems or rust may result.

Managing the battery

- ▶ Do not subject the battery or the charger to physical shocks, e.g., by dropping. Rinse in the event of accidental contact with water. If fluid gets in your eyes, seek medical advice. Fluid that leaks from the battery pack may cause skin irritation or burns.
- ▶ If you detect a strange odour or smoke, pull the plug.
- ▶ Ensure that the power plug is fully inserted into the wall outlet.
- ▶ Pull on the plug instead of the cable to unplug the power cord from a wall outlet.
- ▶ Do not place anything on the cable. Do not lay anything on the cable.
- ▶ Do not bend the cable. The cable must not be rolled up while charging.
- ▶ It is dangerous to use a single outlet for multiple devices.
- ▶ If the cable or plug is damaged, replace the parts with new ones. Contact your authorized dealer.
- ▶ Always keep your charging set away from flammable gases when charging.
- ▶ The charger can be hot. Do not wrap the charger.
- ▶ The charger can be hot. Do not place the charger on floor coverings such as carpets, tatamis, etc.
- ▶ The charger can be hot. Avoid long skin contact with the charger.
- ▶ Do not immerse the battery or the charger. Do not use in rain.
- ▶ Do not charge the battery for more than 24 hours continuously.
- ▶ If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the battery.



WARNING

There is a danger of personal injury or property damage

How safe riding is ensured

Follow the instructions in the user manual of the bike to ensure a safe ride.

Managing the battery

- ▶ The battery comes with a 40% charge. Discharge and charge the battery fully twice to reach an optimum range.
- ▶ Charge the battery before riding.
- ▶ The charger can be used with an input voltage in the range of 100V to 240VAC.
- ▶ After charging pull the cable from the battery and from the wall outlet.
- ▶ Keep the power plug clean and dust free. The charger should be cleaned regularly.
- ▶ Do not rotate the pedals while the battery is being charged and is on the battery holder.
- ▶ Provide ventilation/venting while the battery is charging in enclosed spaces.
- ▶ During storage keep the battery at a charge level of at least 40%.
- ▶ Charge the battery at room temperature between 5°C and 35°C (41°F and 95°F).

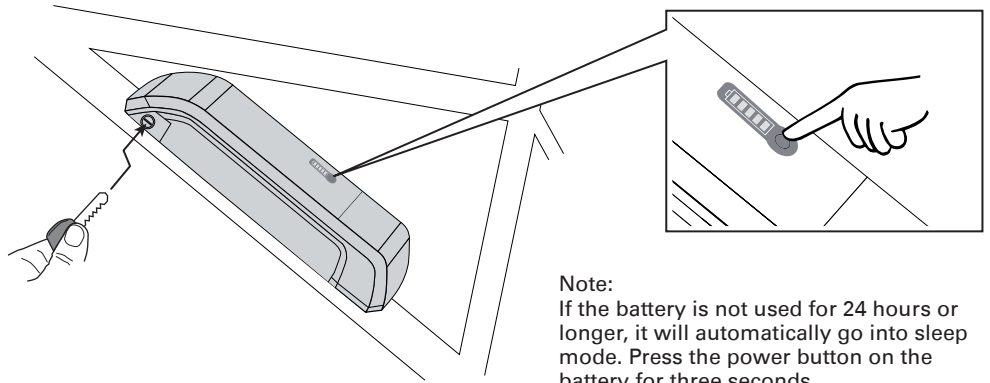
Safe use of the product

- ▶ Examine the battery charger regularly for damage, especially the cable, plug and housing. If the battery charger is damaged, it must only be used after it has been repaired.
- ▶ This product must not be used by persons (including children) with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, unless they are supervised by a person responsible for their safety, or instructed in the use of the product.
- ▶ Do not let children play near the product.

Riding the E-Bike

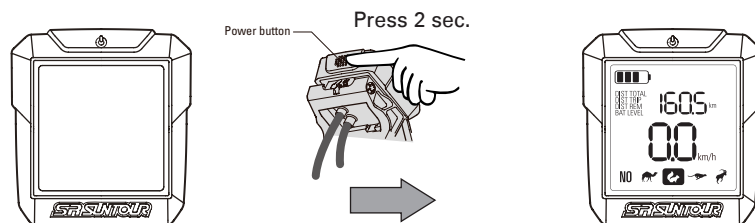
1

Fit the battery and push the battery ON/OFF button



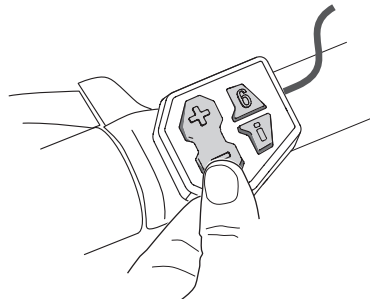
2

Switch on the bike



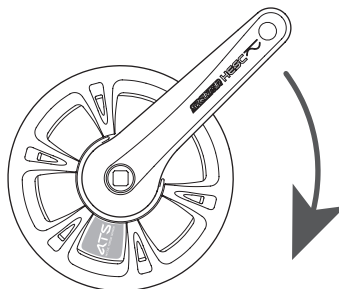
3

Select mode

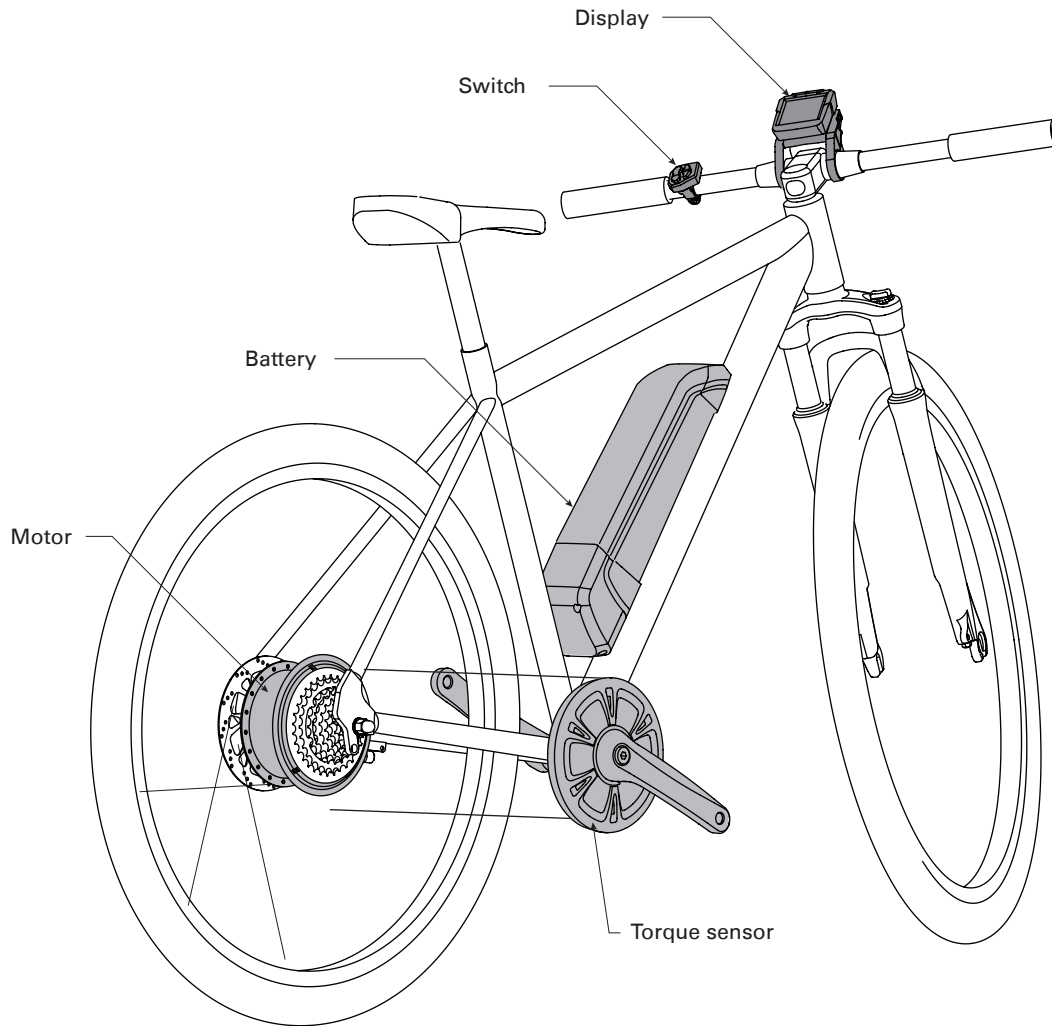


4

Start riding



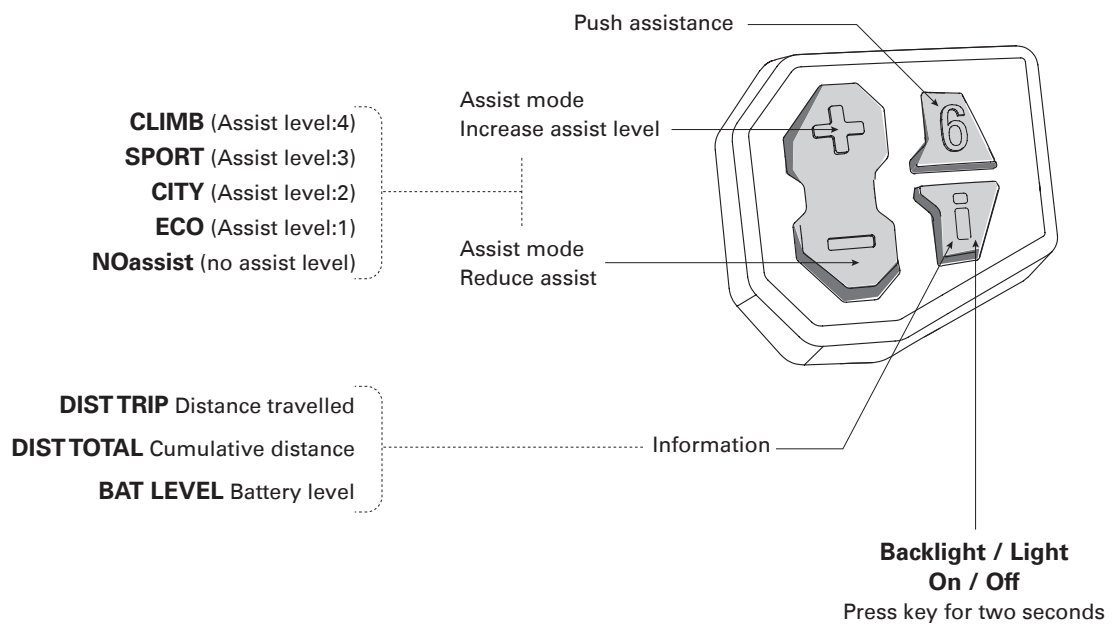
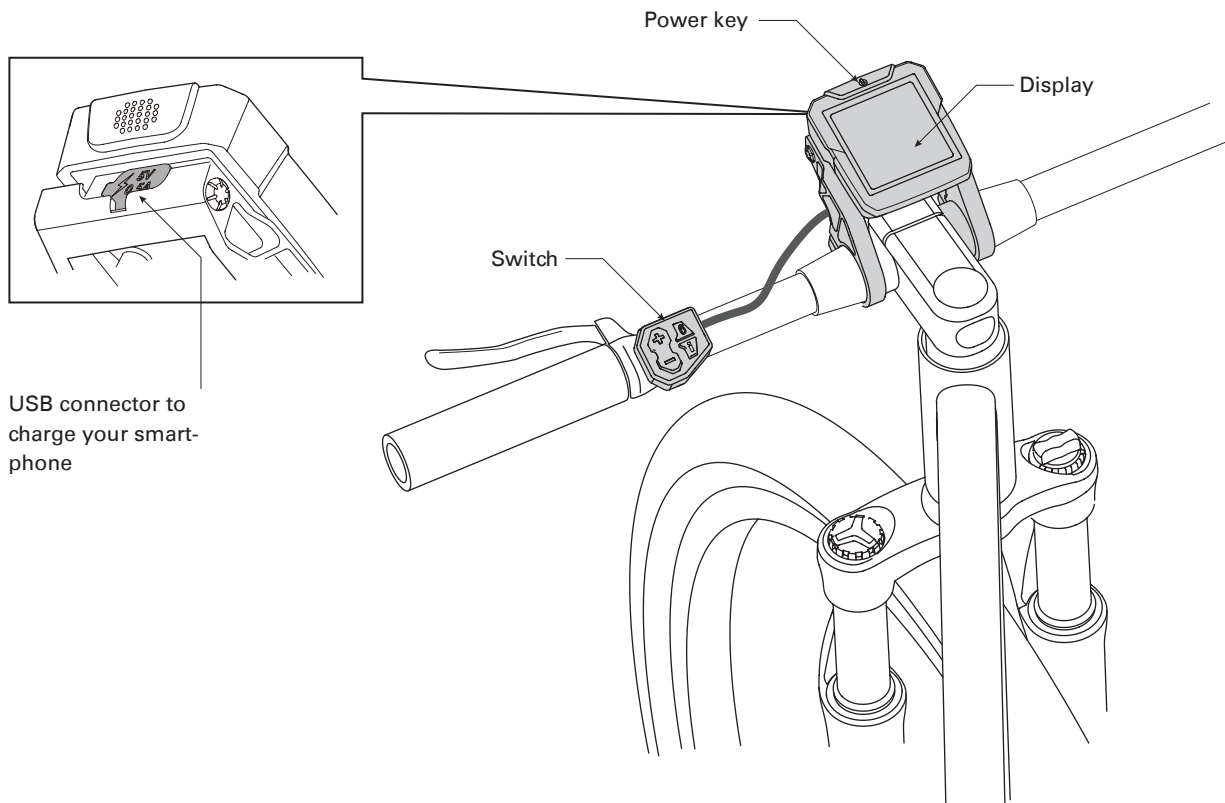
Product characteristics



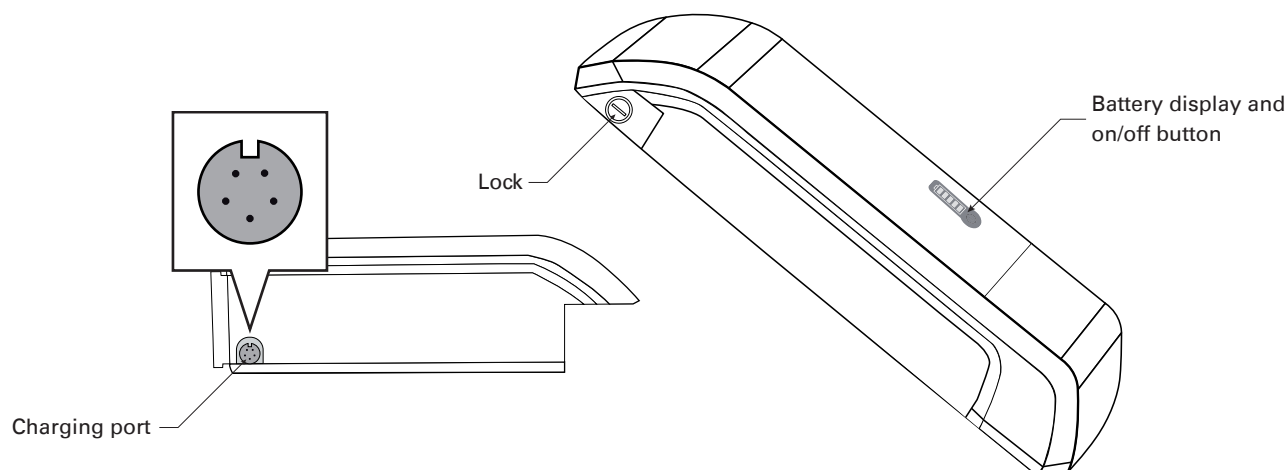
Product specifications

Operating temperature range during discharge	-20°C to 60°C
Operating temperature range during charge	0°C to 45°C
Storage temperature (battery)	-20°C to 45°C
Humidity (storage)	up to 80%
Charging voltage	100V to 240VAC
Charging time	approx. 6 hours
Battery type	Lithium ion battery
Capacity	417Wh
Nominal voltage	36VDC
Motor type	Rear-wheel drive
Motor type	Brushless DC Motor
Nominal motor power	250W
Maximum motor power	400W
Torque	50Nm

Display



Battery

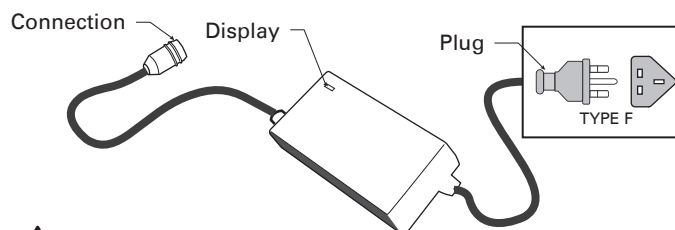


- ▶ If the E-Bike not in use, remove the battery and store it at a temperature between 0°C and 40°C in a dry environment.
- ▶ Do not store the battery with low capacity for a longer period.
- ▶ For storage, the battery should have a capacity of at least 40%.
- ▶ It is recommended to always discharge the battery completely and then fully charge it.

Battery charger

⚠ WARNING

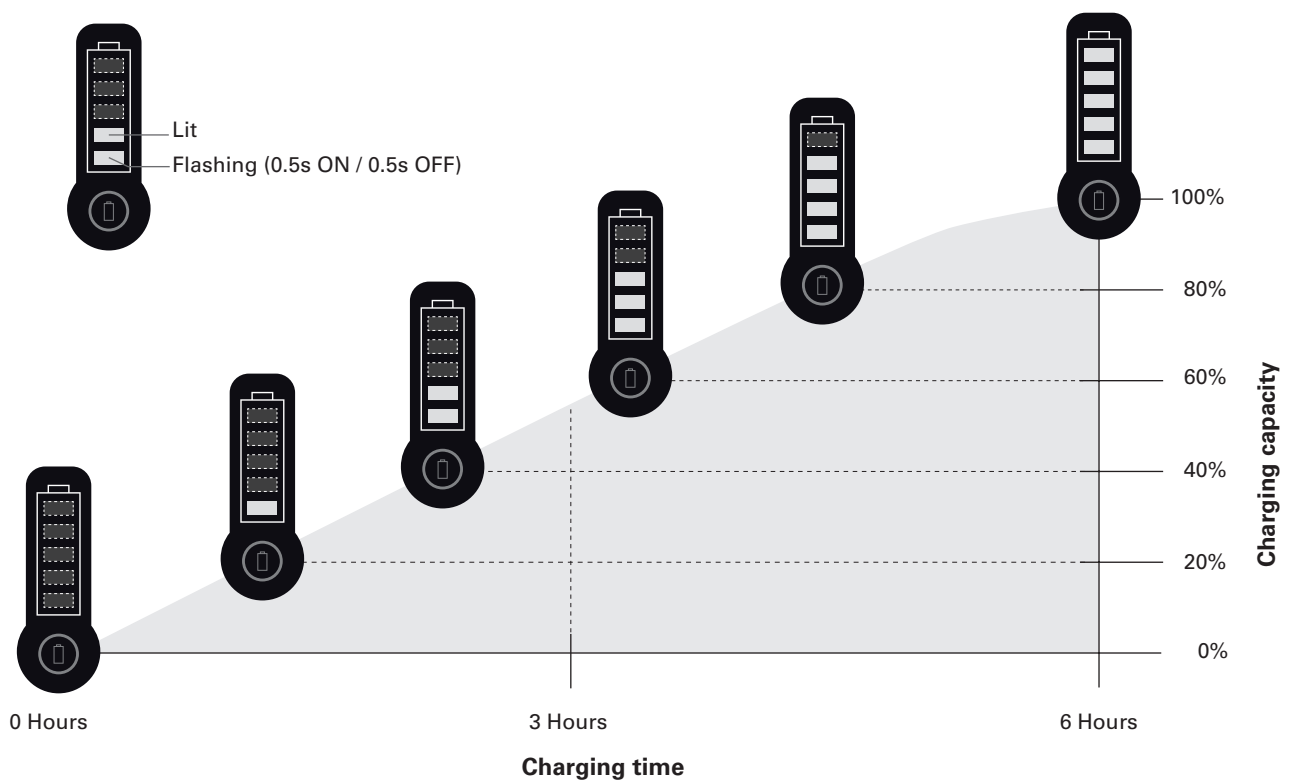
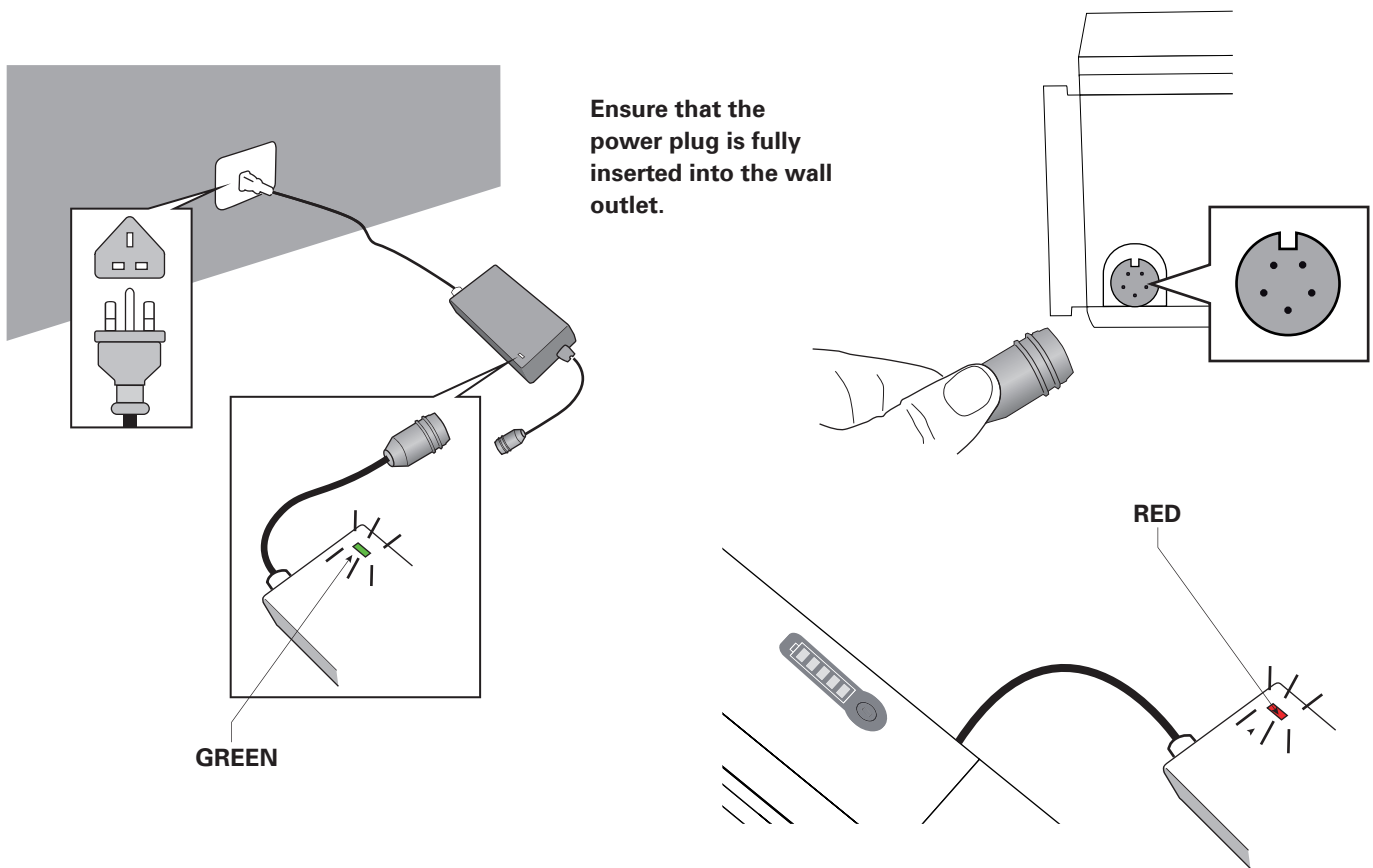
- ▶ Use only batteries and chargers from SR SUNTOUR with your bike. Use of other battery packs can cause injury and involve a risk of fire. If you use other battery packs, we will assume no liability or honour warranties.
- ▶ The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- ▶ Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short-circuit. Shorts caused in this way will invalidate any warranty claims.
- ▶ Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- ▶ Do not connect, or disconnect the battery pack/charger with wet hands.
- ▶ Keep the battery/charger out of reach of children and animals.



⚠ WARNING

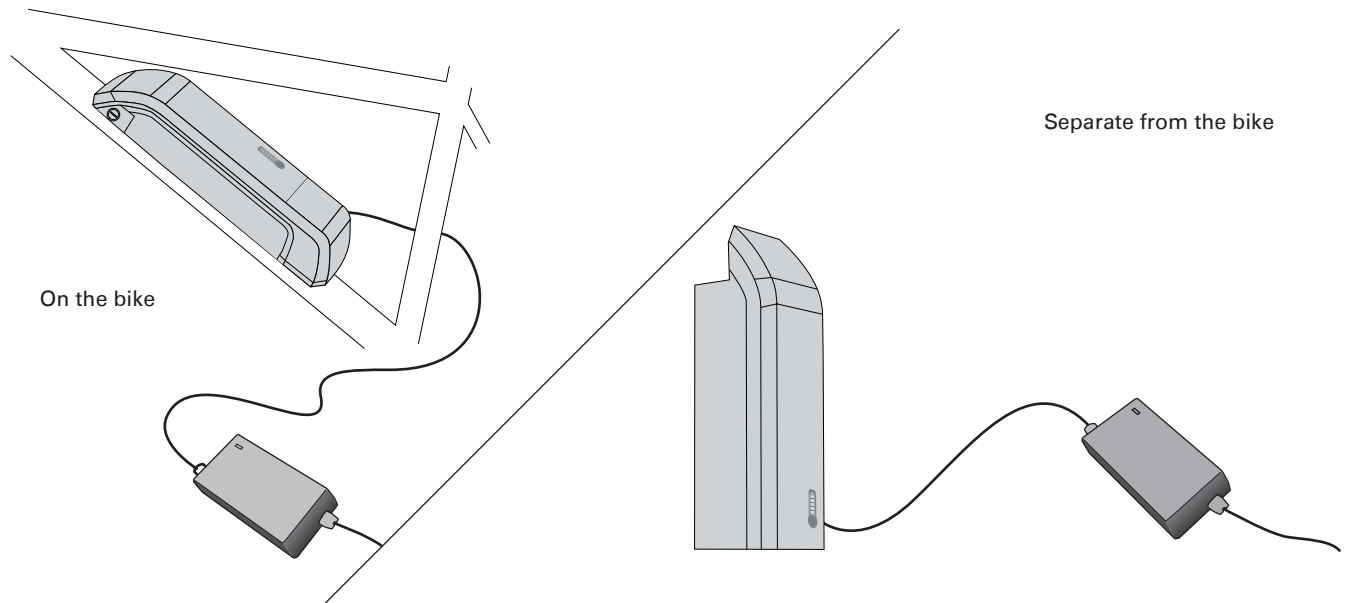
- ▶ Do not subject the battery or the charger to physical shocks, e.g., by dropping. Rinse in the event of accidental contact with water. If fluid gets in your eyes, seek medical advice. Fluid that leaks from the battery pack may cause skin irritation or burns.
- ▶ Do not bend the cable. The cable must not be rolled up while charging.
- ▶ The charger can be hot. Do not wrap the charger and place it on floor coverings such as carpets, etc.
- ▶ If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the battery.

Charging the battery



Every three months or after 40 sub-cycles, you should perform a complete discharge and recharge.

Charging alternatives



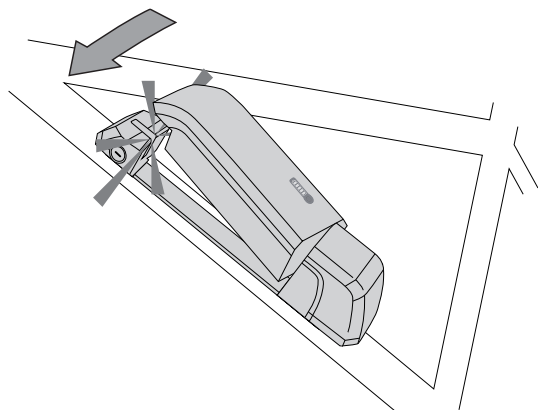
Battery faults

Push the button shortly. If the battery is in an abnormal state, the LEDs will display as follows.

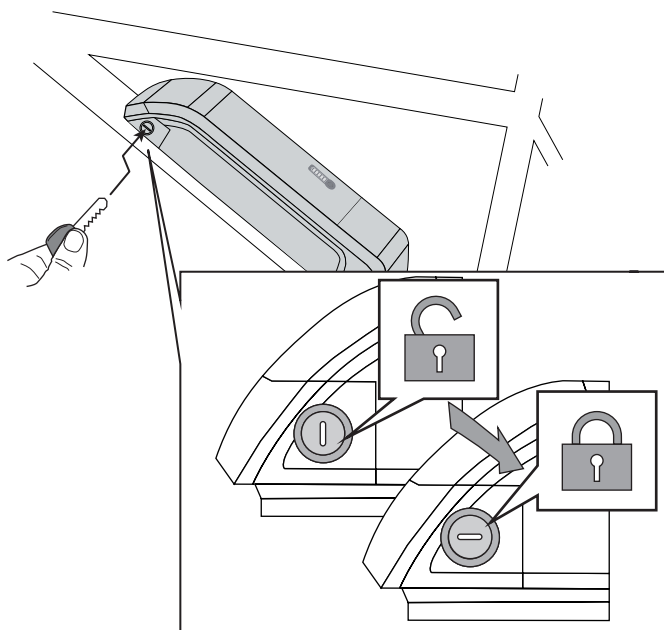


Error state	LED 5	LED 4	LED 3	LED 2	LED 1
Over temperature	On	Off	Off	Off	Flickering for 5 sec.
Over voltage of cell	On	Off	Off	Flickering for 5 sec.	Off
Bad cell	On	Off	Flickering for 5 sec.	Off	Off
Change MOS-FET defective or charging by discharge port	On	Flickering for 5 sec.	Off	Off	Off

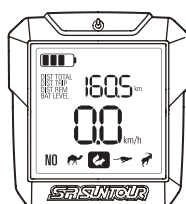
Inserting the battery



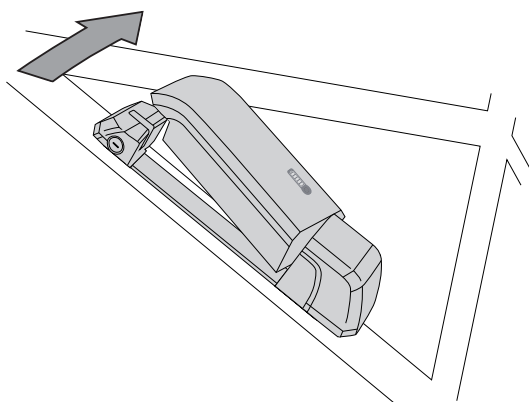
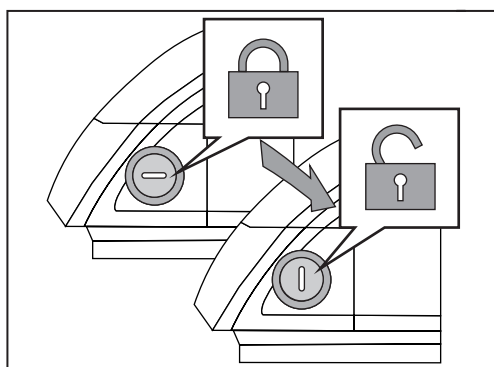
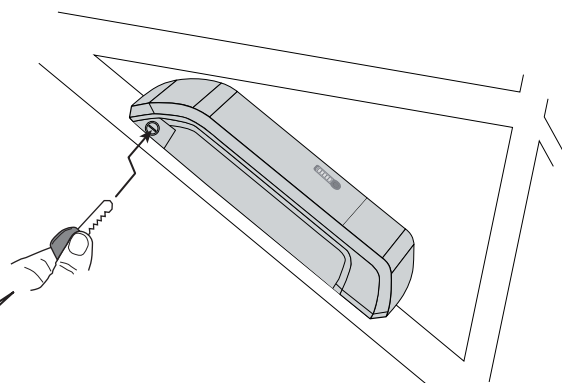
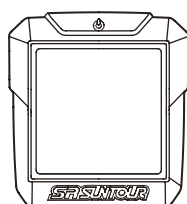
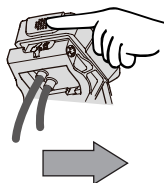
The battery must latch on with an audible click.



Removing the battery

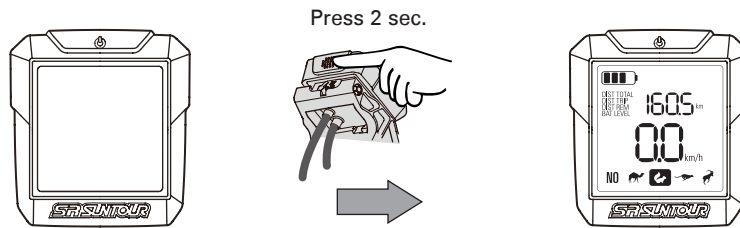


Press 2 sec.



Switching the bike ON/OFF

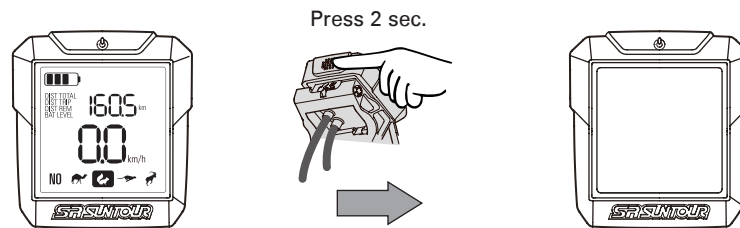
SWITCHING ON



Note:

If the system won't start by pressing the displays switch, press the power button on the battery for three seconds.
Explanation: If the battery is not used for 24 hours or longer, it will automatically go into sleep mode.

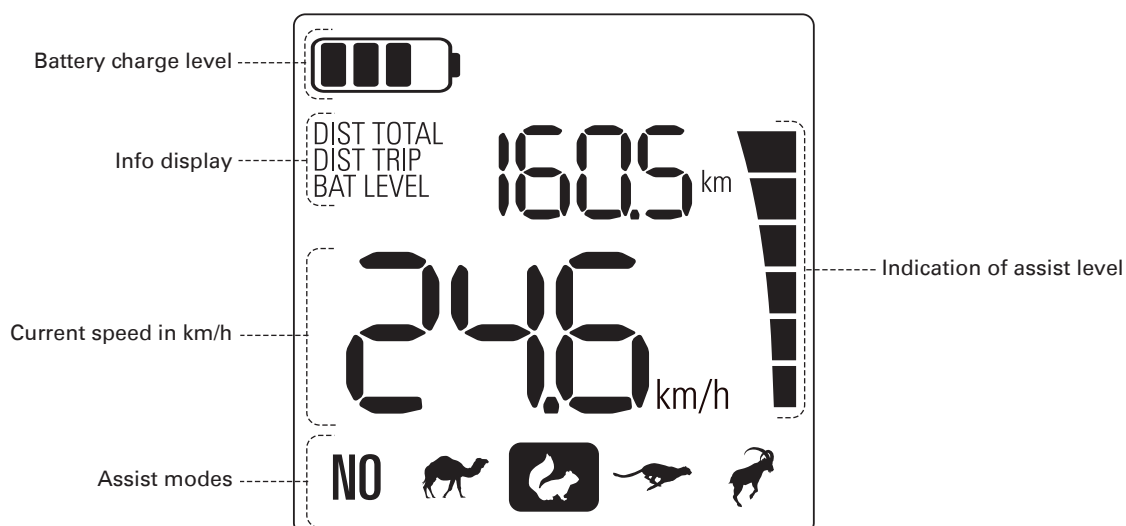
SWITCHING OFF



Automatic SWITCHING OFF



Base screen display

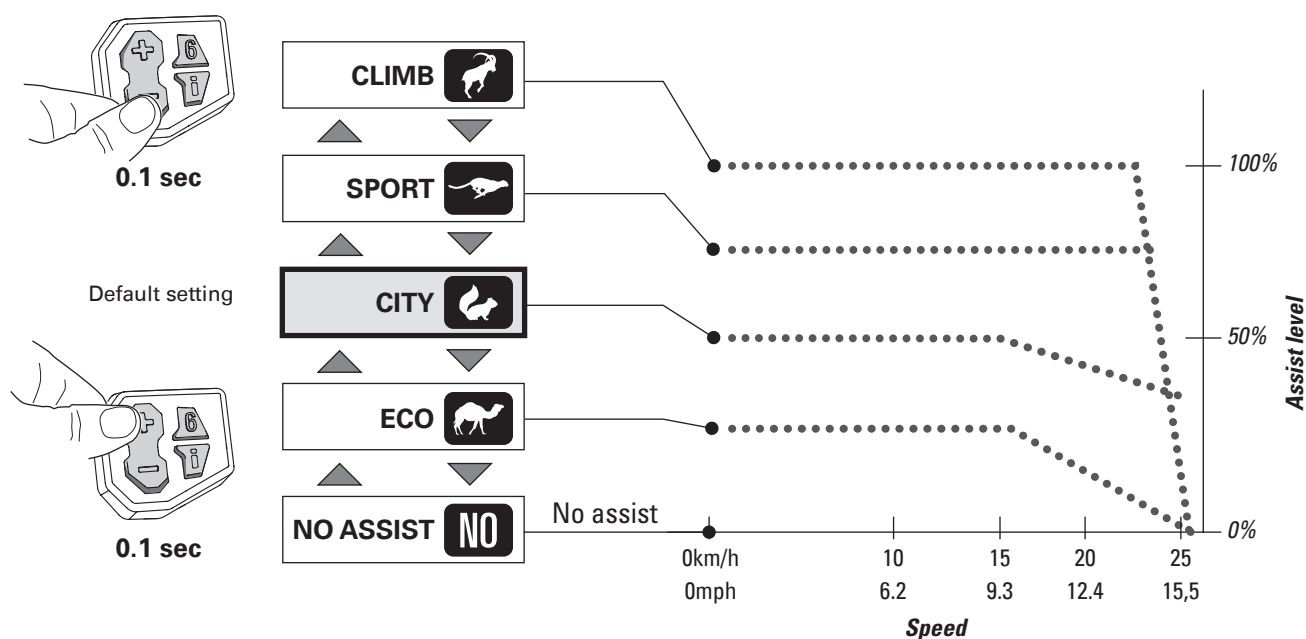


1. Current speed

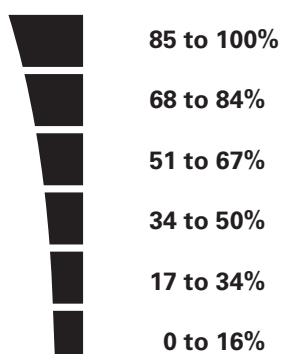
Unit: km/h

Measurement range: 0.0 to 99.9 km/h

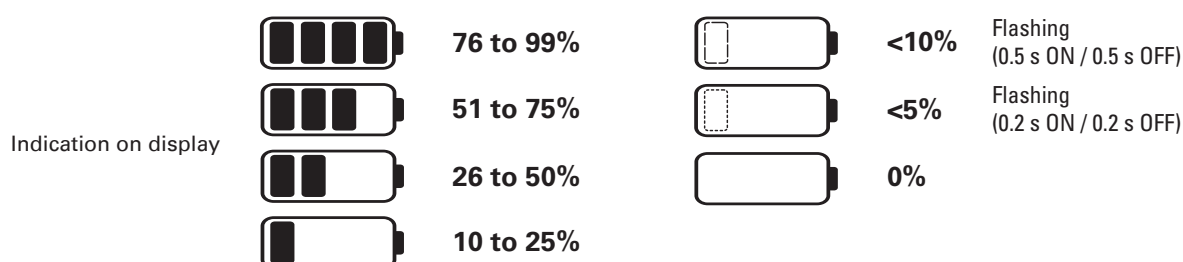
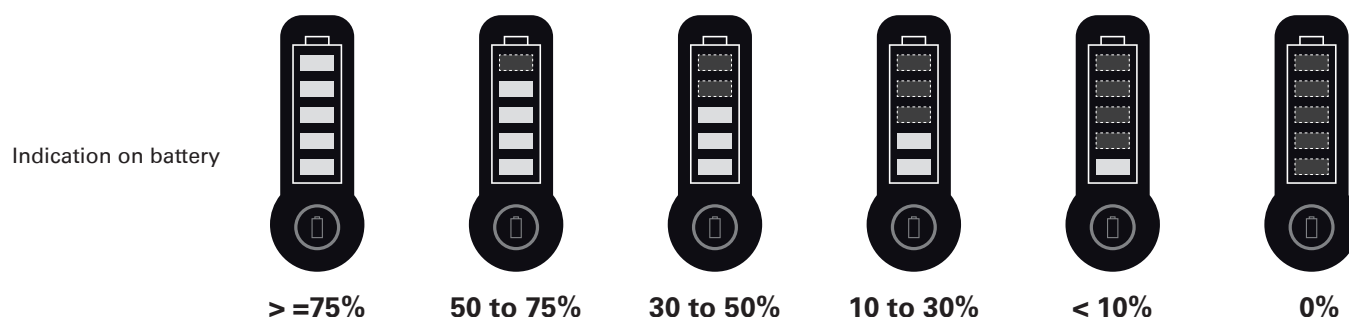
2. Display for changing assist mode



3. Assist level indicator

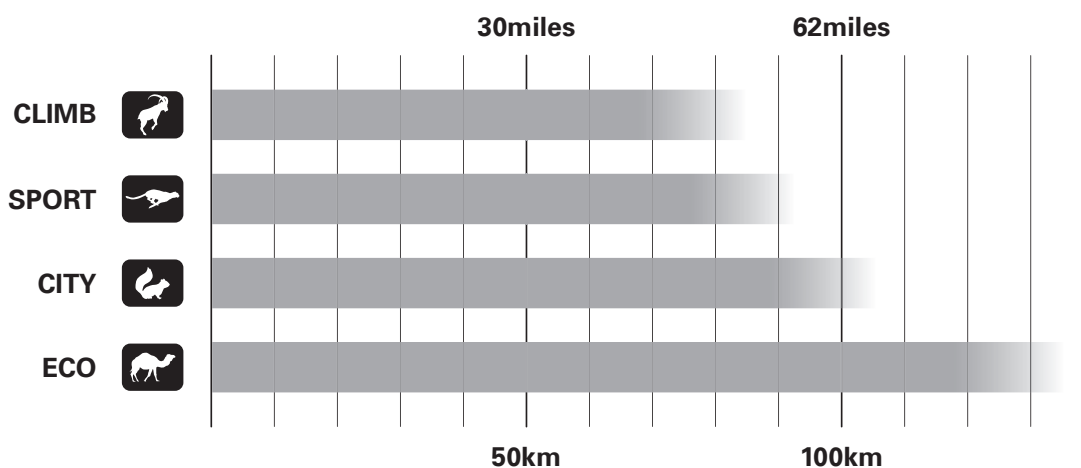


4. Battery capacity



Note:
When the battery charge level has reached less than 5%,
the output power will be reduced.

5. Range



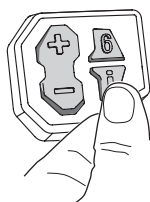
Factors which affect the range

The above figures are based on a speed of 20 km/h on a level road at 15°C–20°C.
The range is influenced by many factors:

- ▶ Weight of the rider
- ▶ Weight of the luggage
- ▶ Selection of path
- ▶ Experience and concentration of the rider
- ▶ State of maintenance of the E-Bike
- ▶ Type, condition and air pressure in the tires
- ▶ Nature of the route
- ▶ Speed, average speed and changes in speed
- ▶ Traffic flow, for example, stop and go
- ▶ Wind direction and wind speed

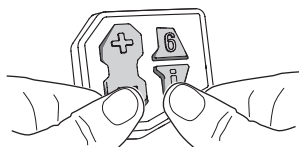
For information on using the battery, see pages 3, 4 and 8. You'll also find information on how to maintain capacity and extend duration.

6. Changing trip information



0.5 sec

RESETTING
TRIP DISTANCE



0.5 sec

(- & +) key



DIST TRIP:

Distance travelled

Unit: 0.1 km

Measurement range: 0.0 to 999.9 km
(default setting)



BAT LEVEL:

Battery charge level

Unit: %

Measurement range: 0% to 99%



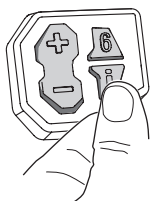
DIST TOTAL:

Cumulative distance

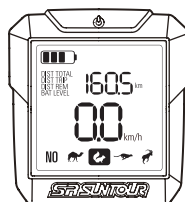
Unit: km

Measurement range: 0 to 9999 km

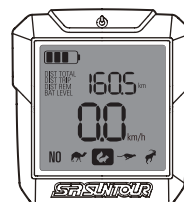
7. Changing background lighting



2 sec



Daytime (default)
100% illumination



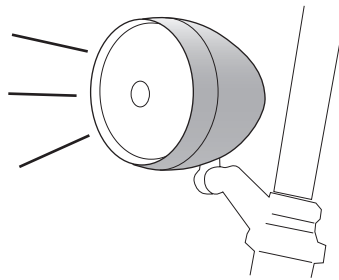
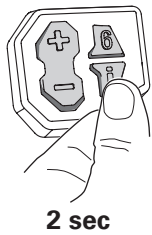
Nighttime
50% illumination

Note:

The on and off at nighttime automatically switches the headlights on and off (if any).

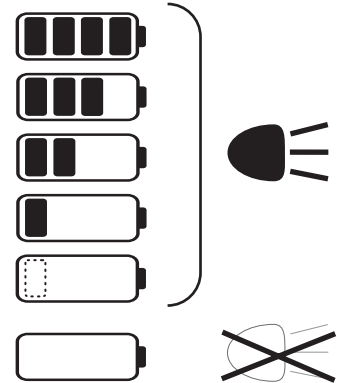
Headlight and taillight (if applicable)

Power on/off



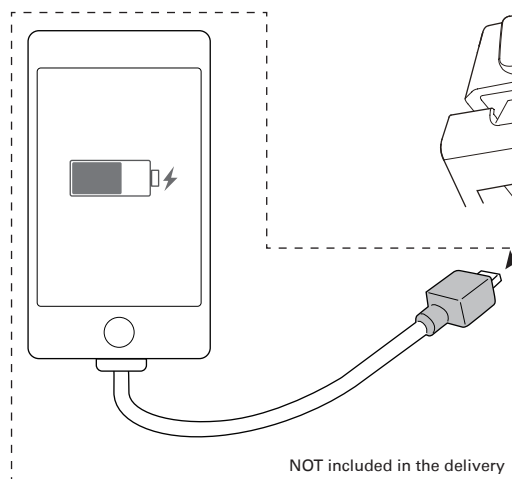
Technical data

Nominal voltage 6V
Output power: 3.0 W



Charging your smartphone

Power supply for external devices via USB connector. The USB connector allows you to charge most devices with a USB connector.

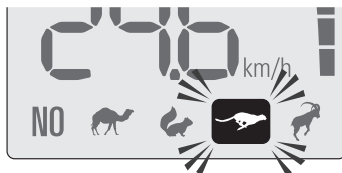


USB connector
Output: 5VDC 0.5A

! WARNING

Cap when not in use. Always close to prevent the possible ingress of water.

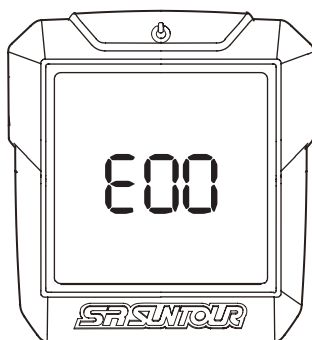
Overheating warning



Long and sharp gradients may cause heating of the motor. Flashing of the "SPORT" mode indicates this.

If the engine really overheats, the system will switch itself off in advance to protect the components.

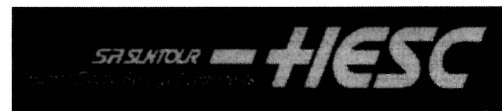
Error codes



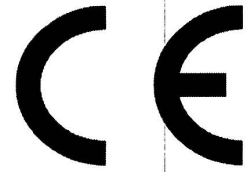
In the rare event of a system malfunction, an error message will appear on the display. If an error message appears, turn the system completely OFF and then ON. If the error message still appears, contact your local dealer for assistance.



Error codes	Error description	Troubleshooting	Solution
Error 00	Control unit communication error	Remove the battery for five minutes. Power on the system.	Replace control unit.
		Check the display contacts and the display holder.	The display or the display holder need to be replaced.
		Check the display cable between the control unit and the display.	Display holder needs to be replaced.
Error 01	Control unit overheating.	Let control unit cool.	Replace control unit.
Error 04	Bike lighting problem.	Check the lighting system of the bike.	
Error 05	Control unit data error.	Remove the battery for five minutes. Power on the system.	Replace control unit.
Error 11	Display communication error.	Check display holder contacts and cables.	Replace display or display cable.
Error 21	Torque sensor electrical problem	Check the sensor contacts.	Replace sensor unit on crank.
			Replace crank.
Error 22	Torque sensor mechanical problem	Check the sensor contacts.	Replace crank.
Error 32	Overcurrent fault	Check the battery contacts, also in the control unit.	Replace control unit.
Error 34	Overvoltage fault	Check the battery contacts, also in the control unit.	Replace control unit.
Error 41	Motor overheating fault	Let motor cool.	Motor or motor cable needs to be replaced.
Error 42	Motor sensor fault	Motor or motor cable fault	Motor or motor cable needs to be replaced.



EC Declaration of Conformity



The equipment which accompanies this declaration is in conformity with the following EU Directives:-

83/37/EC Machinery Directive
 2006/95/EC Low Voltage Directive
 2004/108/EEC Electromagnetic Compatibility Directive
 2001/95/EC General Product Safety Directive
 2012/19/EU Waste Electrical and Electronic Equipment Directive
 2006/66/EC Batteries Directive

Manufacturer:- SR Suntour Inc., #7 Hsing Yeh Rd., Fu Hsing Industrial Zone, Chang Hua, Tawan, R.O.C.

Represented in the EU by:- SR Suntour Europe GmbH, Riedstrasse 31, 83627 Warngau, Germany

A copy of the Technical file for this equipment is available from:- The EU address above.

Description of Equipment

SR Suntour E-Bike HESC ATS 250 W Rear Motor Drive System, 11.6Ah Li-Ion Battery Pack & Battery Charger

The following harmonised standards have been used:-

EN 15194:2009 + A1:2011 Cycles – Electrically power assisted cycles – EPAC Bicycles
 EN 60335-2-29:2004 + A2:2010 Household and similar electrical appliances. Safety. Particular requirements for battery chargers

Other key standards used:-

UN/DOT 38.3 UN Manual of Tests and Criteria Transportation testing Li batteries

Authorised signatory of manufacturer/authorised EU representative

Signature:

Name of signatory:

Daisuke Kobayashi

Tomonori Suenaga

Position in company:

SR SUNTOUR INC.
CEO

SR SUNTOUR EUROPE GmbH
Managing director

Place and Date:

Taiwan, May, 2015

Germany, May, 2015

Halfords e-bike specific warranty conditions

Your Carrera e-bike is guaranteed against manufacturing defects arising from faulty workmanship or materials for 2 years from the original date of sale.

Providing that the cycle:

- Has been properly cared for, regularly serviced and maintained.
- Has not been ridden as part of a commercial use (e.g. hire, courier or delivery service, etc.).
- Has only been fitted with parts recommended by Halfords.
- Has not been modified or altered in any way, in particular no modifications to the Suntour HESC drive system.
- Has not been damaged by accident or misuse.

Any failure caused by normal wear and tear or a lack of servicing and maintenance is excluded.

Under the terms of this guarantee Halfords will bear the cost of the replacement parts and labour to carry out the repair.

Important: This guarantee applies only to cycles used under normal riding conditions. This guarantee does not affect your statutory rights.

Battery pack specific warranty conditions

The battery pack is guaranteed over the warranty period to provide a minimum of 500 charging cycles and to hold at least 60% of its nominal battery capacity.

This is dependent upon the correct use, regular re-charging, correct preparation for storage and storage (as detailed in the Suntour HESC system Owner's Manual).

Halfords will be able to confirm the exact number of charge cycles and whether the battery has been correctly charged / stored from the information that is recorded in the battery pack monitoring and control electronic circuit.

Information on Waste Disposal for Consumers of Electrical & Electronic Equipment

This mark on a product and/or accompanying documents indicates that when it is to be disposed of, it must be treated as Waste Electrical & Electronic Equipment (WEEE).

Any WEEE marked waste products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used.

For proper treatment, recovery and recycling; please take all WEEE marked waste to your Local Authority Civic waste site, where it will be accepted free of charge.

If all consumers dispose of Waste Electrical & Electronic Equipment correctly, they will be helping to save valuable resources and preventing any potential negative effects upon human health and the environment, of any hazardous materials that the waste may contain.



Please recycle your spent batteries.

Batteries should not be disposed of in unsorted municipal waste, but separately collected to facilitate the correct treatment and recycling of the substances they contain. The recycling of batteries ensures the recovery of these valuable materials and prevents any potentially harmful effects upon both the environment and human health.

Please contribute to battery recycling by segregating all spent batteries and actively participating in their collection and recycling. Various battery collection schemes will be in operation in different areas of the country. However, battery collection bins will be available at retail stores that sell batteries as well as at schools, libraries and other public buildings.



Contact

SRSUNTOUR Europe GmbH (Sales and Service)
Riedstrasse 31
83627 Warngau
Germany

Opening times: Monday – Friday 9 am – 5 pm

General phone: +49 8021 50793-0
E-Bike phone: +49 8021 50793-15
Spare parts phone: +49 8021 50793-11
Fax: +49 8021 50793-29
Email: service@srsuntour-cycling.com
hesc@srsuntour-cycling.com

SRSUNTOUR Düsseldorf GmbH (Sales)
Kieshecker Weg 153
40468 Düsseldorf
Germany
Phone: +49 2119 84366-22
Fax: +49 2119 84366-23